Regional District of Nanaimo - Water Services Department

French Creek Water Analysis - 2020 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory and Spectrophotometer										Bureau Veritas Lab	
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)	Total Iron (mg/L)	Manganese (mg/L)
1-Dec-20	1228 Sunrise	0	0	0	0	9	7.60	0.40	168.3	0.17	351.0	Fe and Mn are no longer tested in-house. Please see test results from Bureau Veritas -->		0.11	0.113
7-Dec-20	1381 Gilley	0	0	0	0	10	7.88	0.30	158.6	0.17	351.0			0.0895	0.0851
14-Dec-20	1381 Gilley			0	0	11	8.20	0.50	169.0	0.17	353.0				
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC	0.3	0.02 AO 0.12 MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Orange font indicates non-compliance with the Aesthetic Objective (AO) in the Canadian Drinking Water Guidelines (CDWG)

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Comments:

Notes below about Manganese (2019) from: https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html

Type	Parameter (published, reaffirmed)	MAC (mg/L)	Other value (mg/L)	Common sources of parameter in water	Health considerations	Comments
I = Inorganic chemical parameter	Manganese (2019)	0.12	AO: <0.02	Dissolution of naturally-occurring minerals commonly found in soil and rock. Other sources include industrial discharge, mining activities and leaching from landfills.	**Health Basis of MAC:** Effects on neurological development and behaviour; deficits in memory, attention, and motor skills. **Other:** Formula-fed infants (where water containing manganese at levels above the MAC is used to prepare formula) may be especially at risk.	AO based on minimizing the occurrence of discoloured water, consumer complaints and staining of laundry.

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2-Nov-20	1228 Sunrise	0	0	0	0	12	7.74	0.51	167.1	0.17	348.0	Fe and Mn are no longer tested in-house. Please see test results from Bureau Veritas -->			
9-Nov-20	1381 Gilley	0	0	0	0	11	8.66	0.27	171.2	0.17	356.0				
16-Nov-20	1228 Sunrise			0	0	10	7.90	0.63	167.5	0.17	349.0			0.102	0.0933
23-Nov-20	1381 Gilley			0	0	11	7.83	0.35	168.0	0.17	350.0			0.0616	0.0665
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC	0.3	**0.02** AO **0.12** MAC

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5-Oct-20	1228 Sunrise	0	0	0	0	16	7.95	0.38	169.2	0.17	353.0	Fe and Mn are no longer tested in-house. Please see test results from Bureau Veritas -->			
13-Oct-20	1381 Gilley	0	0	0	0	15	8.15	0.51	169.8	0.17	354.0				
19-Oct-20	1228 Sunrise			0	0	12	7.76	0.73	168.4	0.17	351.0			0.105	0.109
26-Oct-20	1381 Gilley			0	0	13	7.81	0.50	171.3	0.17	357.0				
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC	0.3	0.02 AO 0.12 MAC

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2-Sep-20	1228 Sunrise	0	0	0	0	18	8.00	0.45	172.8	0.17	360.0	Fe and Mn are no longer tested in-house. Please see test results from Bureau Veritas -->			
8-Sep-20	1381 Gilley	0	0	0	0	17	8.02	0.50	171.1	0.18	366.0				
14-Sep-20	1228 Sunrise			0	0	17	8.09	0.54	166.6	0.19	372.0			0.107	0.0852
21-Sep-20	1381 Gilley			0	0	17	8.30	0.30	172.7	0.17	359.0				
28-Sep-20	1381 Gilley			0	0	17	8.28	0.33	171.6	0.17	357.0			0.0852	0.0918
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC	0.3	**0.02** AO **0.12** MAC

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4-Aug-20	1228 Sunrise	0	0	0	0	13	7.40	0.46	177.5	0.18	369.0	Fe and Mn are no longer tested in-house. Please see test results from Bureau Veritas -->			
12-Aug-20	1381 Gilley	0	0	0	0	16.5	8.00	0.35	167.1	0.17	347.0				
17-Aug-20	1228 Sunrise			0	0	16	7.98	0.64	171.1	0.17	356.0			0.106	0.115
24-Aug-20	1381 Gilley			0	0	17	8.19	0.59	170.1	0.17	354.0			0.0986	0.106
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC	0.3	0.02 AO 0.12 MAC

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6-Jul-20	1228 Sunrise	0	0	0	0	14	7.24	0.50	181.1	0.16	359.0	0.11		0.109	**0.138**
13-Jul-20	1381 Gilley	0	0	0	0	15	7.15	0.38	179.9	0.18	373.0			0.0946	**0.115**
20-Jul-20	1228 Sunrise			0	0	13	**6.98**	0.39	176.4	0.18	367.0				
27-Jul-20	1381 Gilley			0	0	17	7.11	0.44	179.4	0.18	373.0				
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC	0.3	**0.02** AO **0.12** MAC

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1-Jun-20	1228 Sunrise	0	0	0	0	12	7.24	0.54	175.9	0.18	366.0	0.10	0.173		
8-Jun-20	1381 Gilley	0	0	0	0	13	7.33	0.58	180.1	0.18	360.0				
15-Jun-20	1228 Sunrise			0	0	13	6.99	0.47	179.8	0.18	374.0				
22-Jun-20	1381 Gilley			0	0	15	7.23	0.43	175.7	0.17	366.0				
29-Jun-20	1381 Gilley			0	0	13	7.33	0.44	178.0	0.18	371.0				
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC	0.3	0.02 AO 0.12 MAC

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4-May-20	1228 Sunrise	0	0	0	0	11	7.52	0.60	175.6	0.18	365.0	0.10	0.141	0.104	0.105
11-May-20	1381 Gilley	0	0	0	0	11	7.30	0.41	176.0	0.18	366.0				
19-May-20	1228 Sunrise			0	0	13	7.24	0.44	176.6	0.18	367.0				
25-May-20	1381 Gilley			0	0	14	7.09	0.36	175.5	0.18	365.0				
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	**0.02** AO **0.12** MAC	0.3	**0.02** AO **0.12** MAC

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6-Apr-20	1228 Sunrise	0	0	0	0	8	7.00	0.50	181.1	0.19	366.0	0.10	0.158
14-Apr-20	1381 Gilley	0	0	0	0	9	7.70	0.48	175.9	0.18	366.0		
20-Apr-20	1228 Sunrise			0	0	12	7.06	0.41	176.7	0.18	367.0		
28-Apr-20	1381 Gilley			0	0	10	7.22	0.37	175.1	0.17	364.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC

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2-Mar-20	1228 Sunrise	0	0	0	0	9	7.04	0.52	178.3	0.18	370.0	0.11	0.139
9-Mar-20	1381 Gilley	0	0	0	0	8	7.04	0.35	172.9	0.17	360.0		
16-Mar-20	1228 Sunrise			0	0	9	7.03	0.51	174.9	0.17	364.0		
23-Mar-20	1381 Gilley			0	0	7	7.80	0.52	175.7	0.18	366.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC

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3-Feb-20	1228 Sunrise	0	0	0	0	9	7.10	0.47	176.7	0.18	368.0	0.09	0.168
10-Feb-20	1381 Gilley	0	0	0	0	8	7.25	0.45	176.9	0.18	368.0		
18-Feb-20	1228 Sunrise			0	0	9	7.30	0.50	177.4	0.18	369.0		
24-Feb-20	1381 Gilley			0	0	8	7.12	0.47	176.1	0.18	366.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC

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I = Inorganic chemical parameter	Manganese (2019)	0.12	AO: <0.02	Dissolution of naturally-occurring minerals commonly found in soil and rock. Other sources include industrial discharge, mining activities and leaching from landfills.	**Health Basis of MAC:** Effects on neurological development and behaviour; deficits in memory, attention, and motor skills. **Other:** Formula-fed infants (where water containing manganese at levels above the MAC is used to prepare formula) may be especially at risk.	AO based on minimizing the occurrence of discoloured water, consumer complaints and staining of laundry.

Regional District of Nanaimo - Water Services Department

French Creek Water Analysis - 2020 Monthly Report

		BC Centre for Disease Control		RDN In-House Laboratory & Spectrophotometer									
Date	Sample Location (Address)	E. coli *	Total Coliform *	E.coli *	Total Coliform *	Temp. (°C)	pH	Free Chlorine Residual (mg/L)	Total Dissolved Solids (mg/L)	Salinity (%)	Conductivity (µS/cm)	Total Iron (mg/L)	Manganese (mg/L)
6-Jan-20	1228 Sunrise	0	0	0	0	9	6.99	1.06	176.1	0.18	367.0	0.08	0.168
13-Jan-20	1381 Gilley	0	0	0	0	8	7.27	0.66	177.5	0.18	369.0		
20-Jan-20	1228 Sunrise			0	0	8	7.29	0.41	180.1	0.17	371.0		
27-Jan-20	1381 Gilley			0	0	8	7.12	0.45	176.0	0.18	366.0		
CDN Drinking Water Guidelines		<1	<1	<1	<1	n/a	7.0-10.5	n/a	500	n/a	n/a	0.3	0.02 AO 0.12 MAC

Legend:

*** Coliforms are measured in colony forming units (CFU) per 100 millilitres of water (CFU/100mL)**

Orange font indicates non-compliance with the Aesthetic Objective (AO) in the Canadian Drinking Water Guidelines (CDWG)

Red font indicates non-compliance with the Maximum Acceptable Concentration (MAC) in the CDWG

Comments:

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